

# **Advanced Mixed Waste Treatment Project**

#### **Danny Nichols**

President and Project Manager Idaho Treatment Group

**April 30, 2014** 



#### **ITG Mission**

Idaho Treatment Group manages and operates the Advanced Mixed Waste Treatment Project at the U.S. Department of Energy's Idaho Operations site

Workers at AMWTP focus on the safe and compliant retrieval, characterization, treatment and shipment of legacy stored, contacthandled transuranic waste, estimated at 65,000 cubic meters, and mixed lowlevel waste for permanent disposal at sites outside of Idaho and to support the receipt and processing of transuranic waste from other DOE sites for shipment to the Department's Waste **Isolation Pilot Plant** (WIPP).



A shipment of transuranic waste from Los Alamos National Laboratory arrives at DOE's Idaho site for treatment on Nov. 18, 2013. This was the first shipment made to AMWTP using the 10-160B shipping cask. AMWTP ultimately received 10 shipments of LANL waste, the last arriving on April 10, 2014.



#### **AMWTP Overview**

- DOE's premier and most versatile facility for treating contact-handled transuranic waste and mixed lowlevel wastes
- Safe and compliant production where employees have worked more than 3.1 million hours under ITG – more than 10 years worked on the project – without a lost time injury
- To date, more than 53,000 cubic meters of transuranic and mixed lowlevel waste have been shipped from Idaho to WIPP and federal and private disposal sites
- Currently storing certified waste shipments on site pending reopening of WIPP



Innovation is a hallmark of AMWTP's safe, productive operations. Top photos show employees retrieving degraded wooden box using employee developed box retrieval tool. The box is then overpacked into an innovative soft-sided overpack that is significantly less expensive, but equally effective as former metal overpack boxes. Below, AMWTP employees practice removal of a TRUPACT III outer cover, in order to develop a new way to unload the TRUPACT III without taking it off its transportation trailer.



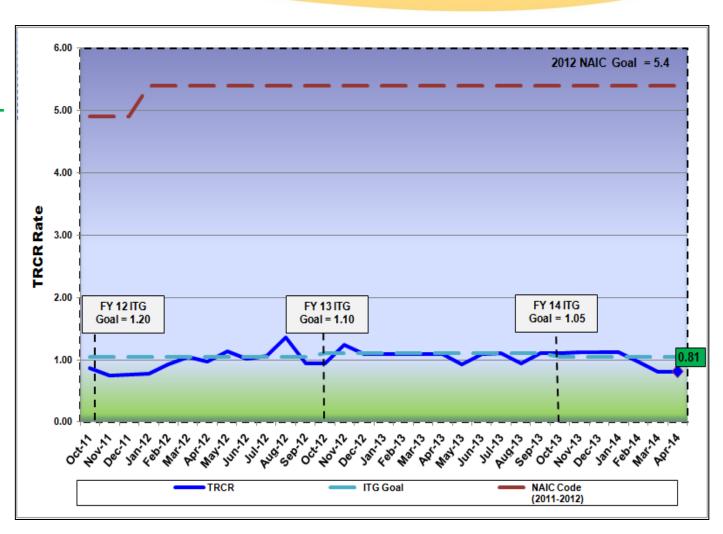
## **Safety Performance**

#### A Decade of Success – Lost Time Injuries

➤ AMWTP last Lost Time Injury: <u>December 7, 2003</u>

> AMWTP Cumulative Hours: Over 15 Million

➤ ITG Million and Beyond Hours Without a Lost Time Injury: Over 3 Million





## **Supporting Idaho Small Business**

- ITG Procurement actively researches and seeks small businesses to provide competitively priced services
- Work is coordinated with other Idaho site contractors
- Through second quarter FY14 have spent
  75 percent of discretionary dollars,
  nearly \$7 million

10/01/2013 - 03/23/2014 (FY-14 SB Goals to date)			
Reported	Goal%	Actual (percent)	Actual (dollars)
Large	N/A	23.1%	\$2,038,062
Small	57.1%	78.2%	\$6,894,204
SDB	15.0%	15.7%	\$1,381,689
Woman-owned	12.0%	12.9%	\$1,138,339
HubZone	3.0%	6.8%	\$598,177
SDVOB	3.0%	5.3%	\$467,054
Veteran	3.0%	5.9%	\$521,317



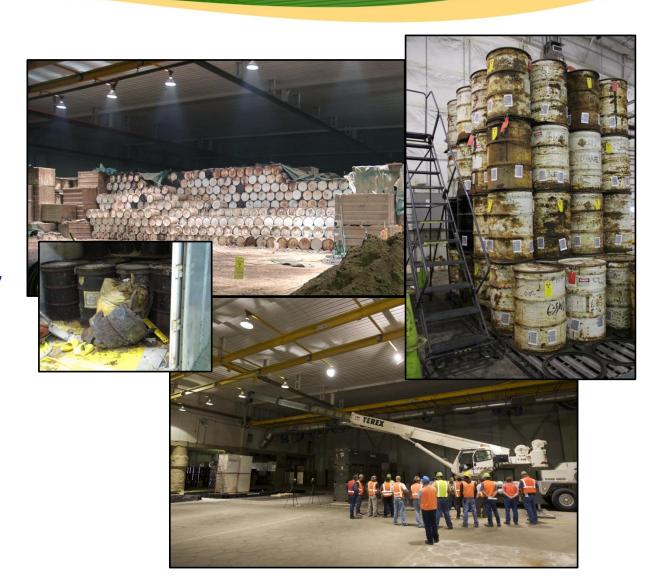
Recent ITG small business contracts have included support for macroencapsulation shipping of mixed low-level waste, and bus service for Idaho Falls-based site employees.





## **AMWTP Challenges**

- Multiple types and sizes of containers; boxes, bins, drums
- Severely degraded containers
- Prohibited items:
   pressurized cylinders;
   liquids; sealed internal
   containers; excessive decay
   heat; excessive fissile
   content; excessive
   plutonium equivalent curie
   content
- Pyrophorics
- PCBs
- Remote-Handled components





# **Treatment Capabilities**



Soils, sludges, and debris waste:

- Prohibited item removal
- Liquid absorption
- Repackaging
- Venting

#### For debris waste:

• Supercompaction



# **New Improvement Initiatives**

- Treatment Facility
  Unoverpacking Project
- Cargos Retrieval
- Offsite Waste
- Band Saw Size Reduction



Cargo container retrieval mock-up

**Band Saw size reduction** 



LANL waste arriving at AMWTP

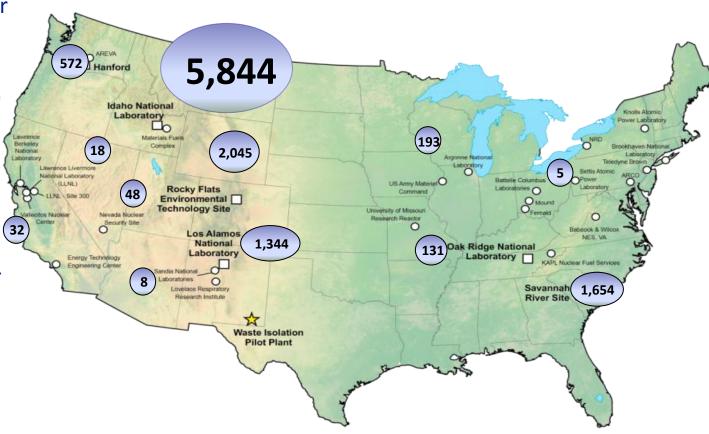


### The Prime Shipper To WIPP

 DOE's primary shipper to WIPP

 DOE Record of Decision allows 8,700 cubic meters to be shipped to AMWTP from other complex sites

- To date AMWTP has received, validated or treated and shipped ~700 cubic meters from 15 other sites
- An essential DOE
   asset for processing
   contact-handled
   transuranic waste and
   mixed low-level
   wastes



Transuranic waste shipments from DOE sites to WIPP as of Feb. 11, 2014. Total number of shipments to WIPP is 11,894.



## **Fulfilling DOE's Mission**

- A strong, sustained, safety culture
- Talented workforce that understands safe and compliant operations
- Delivering DOE its lowest treatment cost for contact-handled transuranic waste
- WIPP's most prolific provider of contact handled transuranic waste
- AMWTP: A regional transuranic waste processing facility for DOE

